

Appl. No. 09/738,647
Appeal Brief in Response
Reply to final Office action of 2 June 2004

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**IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**

Appl. No. : 09/738,647
Applicant(s) : van Gestel et al.
Filed : 12/15/2000
TC/A.U. : 2675
Examiner : Kumar, S. K.
Atty. Docket : PHN 17,798

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**Title: APPARATUS AND SYSTEM FOR REPRODUCTION OF HANDWRITTEN
INPUT**

Mail Stop: APPEAL BRIEF - PATENT'S
Commissioner for Patents
Alexandria, VA 22313-1450

APPEAL UNDER 37 CFR 41.37

Sir:

This is an appeal from the decision of the Examiner dated 2 June 2004, finally
rejecting claims 1, 3-6, and 8-16 of the subject application.

This paper includes (each beginning on a separate sheet):

1. Appeal Brief;
2. Claims on Appeal; and
3. Credit card authorization in the amount of \$340.

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PHN 17,798 Appeal Brief

Atty. Docket No. PHN 17,798

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APPEAL BRIEF

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to
U.S. Philips Corporation
1251 Avenue of the Americas
New York, NY 10020

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 2 and 7 are canceled.
 Claims 1, 3-6, and 8-16 are pending in the application.
 Claims 1, 3-6, and 8-16 stand rejected by the Examiner under 35 U.S.C. 103(a).
 These rejected claims are the subject of this appeal.

IV. STATUS OF AMENDMENTS

A filed amendment was submitted, but not admitted, after the final rejection in the Office Action dated 2 June 2004.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention comprises a method, system, and apparatus for character recognition, wherein the recognized characters are displayed or transmitted in a font that is similar to the style of the user's handwritten characters. In this way, a computer-formatted handwritten note from a user conveys the content of the note in a style that matches the style of the user's handwriting, and thereby imparts a more personal sense to the note (Applicants' page 2, line 18-23). For example, depending upon the user's handwriting, the word "Hello" may appear as *Hello*, *Hello*, *Hello*, *Hello*, *Hello*, *Hello*, *Hello*, and so on (page 4, lines 4-8; see also FIG. 5).

The system of this invention compares the user's handwritten characters with a plurality of fonts, and selects a display font based on this comparison (page 5, lines 3-4). The system recognizes each character that the user inputs, and then displays and/or transmits the recognized character in the selected display font that corresponds to the user's handwritten style (page 5, lines 11-13 and page 5, line 34 – page 6, line 2). The system may also include a font-creation unit that creates a font based on a sample of the user's handwritten input, and this font becomes one of the aforementioned predefined fonts for subsequent handwritten input display (page 4, lines 10-11; page 5, lines 32-34; FIG. 3, page 7, lines 4-16; FIG. 4, page 7, line 17 – page 8, line 13)

As claimed in independent claim 1, upon which claims 3-5 and 13 depend, the invention comprises an apparatus (FIG. 1) for reproducing handwritten input, comprising:

an input device for inputting a plurality of handwritten characters (102 of FIG. 1; page 3, lines 27-31),

a recognition unit for recognizing the plurality of handwritten characters (106; page 4, lines 1-2),

a selection unit for selecting a display font from among a plurality of fonts (108, page 4, lines 2-4), and

a display unit for displaying one or more display characters corresponding to respective ones of the recognized handwritten characters, using the display font (104; page 3, line 31 – page 4, line 2; page 4, lines 29-32),

wherein

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the selection unit selects the display font based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts (108; page 4, lines 5-9; page 4, lines 22-26; FIG. 5, page 8, lines 14-21).

As claimed in independent claim 6, upon which claim 14 depends, the invention comprises a system (FIG. 2) for transmission of handwritten input comprising:

a transmitter (202; page 5, lines 19-20) that includes:

an input device for inputting a plurality of handwritten characters (208; page 5, lines 26-28),

a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes (210; page 5, lines 28-30),

a selection unit for selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts (212; page 5, line 31; FIG. 5, page 8, lines 14-21), and

transmission means for transmitting the one or more character codes and a font identification of the select font to a transmission medium (216; page 5, line 34 – page 6, line 2); and

a receiver (204; page 5, lines 19-21) that includes:

receiving means for receiving the one or more character codes and the font identification from the transmission medium (218; page 6, lines 9-11) and

a display unit for displaying one or more display characters corresponding to respective ones of the character codes, using a display font corresponding to the font identification of the select font (222; page 6, lines 13-18).

As claimed in independent claim 8, upon which claim 15 depends, the invention comprises a system (FIG. 2) for transmission of handwritten input, comprising:

an input device for inputting a plurality of handwritten characters (208; page 5, lines 26-28),

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a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes (106; page 4, lines 1-2),

a creation unit for creating a new font on the basis of the plurality of handwritten characters (214; page 5, lines 32-34; FIG. 3, page 7, lines 4-16; FIG. 4, page 7, line 17 – page 8, line 13),

a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts (212; page 5, line 31; FIG. 5, page 8, lines 14-21), and

a transmitter that is configured to transmit the one or more characters codes and a font identification of the select font to a transmission medium (216; page 5, line 34 – page 6, line 2).

As claimed in independent claim 9, upon which claims 10-12 and 16 depend, the invention comprises a method of reproducing handwritten input, comprising the steps of:

inputting a plurality of handwritten characters (page 3, lines 27-31; page 5, lines 26-28),

recognizing the plurality of handwritten characters (page 5, lines 28-30; page 4, lines 1-2),

selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts (page 4, lines 2-4; page 5, line 31; FIG. 5, page 8, lines 14-21), and

in the select font, displaying one or more display characters corresponding to respective ones of the recognized handwritten characters (page 3, line 31 – page 4, line 2; page 4, lines 29-32; page 6, lines 13-18).

As claimed in dependent claim 13, upon which claim 3 depends, the invention comprises an apparatus of claim 1, further including

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a creation unit for creating a new font on the basis of the plurality of handwritten characters (112; page 4, lines 10-11; FIG. 3, page 7, lines 4-16; FIG. 4, page 7, line 17 – page 8, line 13).

VI. ISSUES TO BE REVIEWED ON APPEAL

Claims 1, 6, and 8-12 stand rejected under 35 U.S.C. 103(a) over Shojima et al. (USP 5,592,565, hereinafter Shojima).

Claims 3-5 and 13-16 stand rejected under 35 U.S.C. 103(a) over Shojima and Cok (USP 6,298,154).

VII. ARGUMENT

Rejection under 35 U.S.C. 103 (a) over Shojima

Claim 1

Claim 1, upon which claims 3-5 and 13 depend, claims an apparatus for reproducing handwritten input, that includes: a recognition unit for recognizing a plurality of handwritten characters, and a selection unit for selecting a display font from among a plurality of fonts, based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts.

Shojima teaches a recognition unit for recognizing a plurality of handwritten characters, but does not teach a selection unit for selecting a display font from among a plurality of fonts, based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts.

The final Office action asserts that Shojima teaches a selection unit for selecting a display font from among a plurality of fonts at column 3, lines 36-48 (Office action page 2, paragraph 2, lines 6-7). The applicants disagree with this characterization of Shojima. The following is the cited text from Shojima:

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"A basic operation of the present apparatus is illustrated in FIG. 2. When a menu 3 on the tablet 2 is selected by a pen, the menu processing unit 6 is activated to determine the data processing mode and transfer direction. When a character is entered by hand-writing in a character input area 4 on the tablet 2, the input stroke processing unit 5 is activated. For example, when a menu item "recognition" is selected, the menu processing unit 6 sets a recognition mode and a transfer direction to the display unit 8. The input stroke processing unit 5 recognizes the next hand written input character, and a result of recognition is transferred to the display unit 8 for display."

The applicants respectfully note that the above text describes a character-recognition system, and does not address the selection of a display font. The applicants particularly note the absence of the word "font" in the cited text, and, correspondingly, the absence of the applicants' claimed font selector.

Shojima does not teach or suggest comparing a user's handwritten characters to characters of a plurality of fonts to determine a font for displaying the user's recognized characters, as specifically claimed in the applicant's claim 1, and the Examiner has failed to support the assertion that Shojima provides this teaching.

As noted in MPEP 2142, when the Examiner fails to provide a prima facie case of obviousness, by failing to establish that the prior art reference teaches all of the claim limitations, the applicant is under no obligation to submit evidence of nonobviousness.

Because Shojima neither teaches nor suggests a selection unit for selecting a display font from among a plurality of fonts, based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts, the applicants respectfully maintain that claim 1, and each of its dependent claims 3-5 and 13, are patentable under 35 U.S.C. 103(a) over Shojima.

Claim 6

Claim 6, upon which claim 14 depends, claims a system for transmission of handwritten input that includes a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes, a selection unit for selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in

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each of the plurality of predefined fonts, and a display unit for displaying one or more display characters corresponding to respective ones of the character codes, using a display font corresponding to the select font.

As noted above with regard to claim 1, Shojima neither teaches nor suggests a selection unit for selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, as specifically claimed in claim 6, and thus the applicants respectfully maintain that claims 6 and 14 are patentable under 35 U.S.C. 103(a) over Shojima.

Claim 8

Claim 8, upon which claim 15 depends, claims a system for transmission of handwritten input that includes a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes, a creation unit for creating a new font on the basis of the plurality of handwritten characters, and a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts.

As noted above, Shojima neither teaches nor suggests a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts.

Further, Shojima does not teach or suggest a creation unit for creating a new font on the basis of the plurality of handwritten characters. Shojima teaches a manual pixel-based font creation process, as illustrated in Shojima's FIGs. 28a-28b and detailed at Shojima's column 5, lines 29-52. Shojima is silent with regard to creating a new font based on a plurality of handwritten characters, as specifically claimed in claim 8.

Because Shojima neither teaches nor suggests a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality

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of predefined fonts, and because Shojima neither teaches nor suggests a creation unit for creating a new font on the basis of the plurality of handwritten characters, as specifically claimed in claim 8, the applicants respectfully maintain that claims 8 and 15 are patentable under 35 U.S.C. 103(a) over Shojima.

Claims 9-12

Claim 9, upon which claims 10-12 and 16 depend, claims a method of reproducing handwritten input, that includes: recognizing a plurality of handwritten characters, selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and displaying one or more display characters corresponding to respective ones of the recognized handwritten characters in the select font.

Shojima does not teach or suggest selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and the Examiner has failed to support the assertion that Shojima provides this teaching.

Because Shojima neither teaches nor suggests selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, as specifically claimed in claim 9, upon which claims 10-12 and 16 depend, the applicants respectfully maintain that claims 9-12 and 16 are patentable under 35 U.S.C. 103(a) over Shojima.

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Rejection under 35 U.S.C. 103(a) over Shojima and Cok

Claims 3 and 13

The applicants respectfully maintain that claims 13 and 3 are patentable over Shojima and Cok, based on the remarks above regarding Shojima and claim 1, upon which claims 13 and 3 depend.

Cok teaches melding handwritten input with a "normative" font to improve the appearance of the handwritten input. The user or operator may select the font to be used as the normative font, but Cok does not teach a selection unit that selects the font based on a comparison of handwritten input to characters in a variety of fonts.

Neither Shojima nor Cok, individually or collectively, teach or suggest an apparatus that includes a selection unit for selecting a display font from among a plurality of fonts, based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts, and Shojima neither teaches nor suggests a creation unit for creating a new font on the basis of the plurality of handwritten characters, as specifically claimed by the applicants.

Claims 4-5

The applicants respectfully maintain that claims 4-5 are patentable over Shojima and Cok, based on the remarks above regarding Shojima and claim 1, upon which claims 4-5 depend.

As noted above, Cok does not teach a selection unit that selects the font based on a comparison of handwritten input to characters in a variety of fonts.

Neither Shojima nor Cok, individually or collectively, teach or suggest comparing a user's handwritten characters to characters of a plurality of fonts to determine a font for displaying the user's recognized characters, as specifically claimed by the applicants.

Claim 14

The applicants respectfully maintain that claim 14 is patentable over Shojima and Cok, based on the remarks above regarding Shojima and claim 6, upon which claim 14 depends.

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As noted above, Cok does not teach a selection unit that selects the font based on a comparison of handwritten input to characters in a variety of fonts.

Neither Shojima nor Cok, individually or collectively, teach or suggest a selection unit for selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, as specifically claimed by the applicants.

Claim 15

The applicants respectfully maintain that claim 15 is patentable over Shojima and Cok, based on the remarks above regarding Shojima and claim 8, upon which claim 15 depends.

As noted above, Cok does not teach a selection unit that selects the font based on a comparison of handwritten input to characters in a variety of fonts.

Neither Shojima nor Cok, individually or collectively, teach or suggest a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and Shojima neither teaches nor suggests a creation unit for creating a new font on the basis of the plurality of handwritten characters, as specifically claimed by the applicants.

Claim 16

The applicants respectfully maintain that claim 16 is patentable over Shojima and Cok, based on the remarks above regarding Shojima and claim 9, upon which claim 16 depends.

As noted above, Cok does not teach selecting a font based on a comparison of handwritten input to characters in a variety of fonts.

Neither Shojima nor Cok, individually or collectively, teach or suggest selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, as specifically claimed by the applicants.

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CONCLUSIONS

Because neither Shojima nor Cok teaches or suggests an apparatus or system that includes a selection unit that selects a select font from a plurality of predefined fonts, based on a comparison of one or more handwritten characters with one or more corresponding characters in each of a plurality of predefined fonts, the applicants respectfully request that the Examiner's rejection of claims 1, 3-6, 8, and 13-15 under 35 U.S.C. 103(a) over Shojima and/or Shojima and Cok be reversed by the Board, and the claims be allowed to pass to issue.

Because neither Shojima nor Cok teaches or suggests a method of reproducing handwritten input that includes selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of handwritten characters with one or more corresponding characters in each of a plurality of predefined fonts, the applicants respectfully request that the Examiner's rejection of claims 9-12 and 16 under 35 U.S.C. 103(a) over Shojima and/or Shojima and Cok be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted,


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APPENDIX
CLAIMS ON APPEAL

1. Apparatus for reproducing handwritten input, comprising:
 - an input device for inputting a plurality of handwritten characters,
 - a recognition unit for recognizing the plurality of handwritten characters,
 - a selection unit for selecting a display font from among a plurality of fonts, and
 - a display unit for displaying one or more display characters corresponding to respective ones of the recognized handwritten characters, using the display font,wherein
 - the selection unit selects the display font based on a comparison of one or more of the plurality of handwritten characters with one or more corresponding characters in each of the plurality of fonts.
3. Apparatus as claimed in claim 13, wherein
 - the creation unit is arranged to create the font on basis of averaging character characteristics over a number of handwritten characters.
4. Apparatus as claimed in claim 1, comprising
 - a segmentation unit for segmenting the inputted handwritten characters into one or more words and a spell check unit for verifying the presence of the one or more words in an electronic dictionary.
5. Apparatus as claimed in claim 1, comprising
 - a further input device for inputting further characters,wherein
 - the display unit is configured to display one or more display characters corresponding to respective ones of the further characters using the display font.

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6. System for transmission of handwritten input comprising:

a transmitter that includes:

an input device for inputting a plurality of handwritten characters,

a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes,

a selection unit for selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and

transmission means for transmitting the one or more characters codes and a font identification of the select font to a transmission medium; and

a receiver that includes:

receiving means for receiving the one or more character codes and the font identification from the transmission medium and

a display unit for displaying one or more display characters corresponding to respective ones of the character codes, using a display font corresponding to the font identification of the select font.

8. A system for transmission of handwritten input, comprising:

an input device for inputting a plurality of handwritten characters,

a recognition unit for recognizing the plurality of handwritten characters and representing them as one or more respective character codes,

a creation unit for creating a new font on the basis of the plurality of handwritten characters,

a selection unit for selecting a select font, from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and

a transmitter that is configured to transmit the one or more characters codes and a font identification of the select font to a transmission medium.

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9. Method of reproducing handwritten input, comprising the steps of:
- inputting a plurality of handwritten characters,
 - recognizing the plurality of handwritten characters,
 - selecting a select font from a plurality of predefined fonts, based on a comparison of one or more characters of the handwritten characters with one or more corresponding characters in each of the plurality of predefined fonts, and
 - in the select font, displaying one or more display characters corresponding to respective ones of the recognized handwritten characters.
10. Method as claimed in claim 9, wherein the font is selected when a predetermined number of characters have been recognized.
11. Computer program for carrying out the steps of the method according to claim 9.
12. Tangible medium carrying the computer program of claim 11.
13. Apparatus of claim 1, further including
- a creation unit for creating a new font on the basis of the plurality of handwritten characters.
14. System of claim 6, further including
- a creation unit for creating a new font on the basis of the plurality of handwritten characters,
 - wherein
 - the transmission means is further configured to transmit the new font to the receiver.

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15. System of claim 8, further including

a creation unit for creating a new font on the basis of the plurality of handwritten characters,

wherein

the transmitter is further configured to transmit the new font to the transmission medium.

16. Method of claim 9, further including

creating a new font on the basis of the plurality of handwritten characters.